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FILE 'USPATFULL' ENTERED AT 18:35:09 ON 04 MAY 2005

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=> e shau-chi chi/au

E1	1	SHAU Z/AU
E2	1	SHAU Z L/AU
E3	0 -->	SHAU-CHI CHI/AU
E4	1	SHAUAKHANOV K SH/AU
E5	1	SHAUAN DANIEL D/AU
E6	3	SHAUB A/AU
E7	1	SHAUB G R/AU
E8	27	SHAUB H/AU
E9	29	SHAUB HAROLD/AU
E10	1	SHAUB HENRY Z/AU
E11	1	SHAUB IU B/AU
E12	1	SHAUB J/AU

=> e chi shau-chi/au

E1	1	CHI SHANNON/AU
E2	4	CHI SHAU CHI/AU
E3	0 -->	CHI SHAU-CHI/AU
E4	1	CHI SHAW TSONG/AU
E5	3	CHI SHENG C/AU
E6	3	CHI SHENG CHEN/AU
E7	1	CHI SHENG HSIEH/AU
E8	1	CHI SHENG MING B/AU
E9	1	CHI SHIH FANG/AU
E10	1	CHI SHU CHENG/AU
E11	1	CHI SHUANG HUANG/AU
E12	1	CHI SHUN YU/AU

=> s e2

L1 4 "CHI SHAU CHI"/AU

=> d l1 1-4 bib

L1 ANSWER 1 OF 4 USPATFULL on STN

AN 2004:1844 USPATFULL

TI Immortal cell line derived from grouper *Epinephelus coioides* and its applications therein

IN **Chi, Shau-Chi**, Taipei, TAIWAN, PROVINCE OF CHINA

PI US 2004001863 A1 20040101

AI US 2001-4432 A1 20011206 (10)

RLI Continuation-in-part of Ser. No. US 1999-450696, filed on 30 Nov 1999, GRANTED, Pat. No. US 6436702

PRAI US 1998-110699P 19981203 (60)

DT Utility

FS APPLICATION

LREP VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP, P.O. BOX 34385, WASHINGTON, DC, 20043-9998

CLMN Number of Claims: 14

ECL Exemplary Claim: 1

DRWN 8 Drawing Page(s)

LN.CNT 952

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 2 OF 4 USPATFULL on STN

AN 2002:294744 USPATFULL

TI Immortal cell line derived from grouper Epinephelus coioides and its applications therein  
IN Chi, Shau-Chi, Taipei, TAIWAN, PROVINCE OF CHINA  
PI US 2002164787 A1 20021107  
US 6566117 B2 20030520  
AI US 2001-998212 A1 20011203 (9)  
RLI Division of Ser. No. US 1999-450696, filed on 30 Nov 1999, PENDING  
PRAI US 1998-110699P 19981203 (60)  
DT Utility  
FS APPLICATION  
LREP VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP, P.O. BOX 34385, WASHINGTON, DC, 20043-9998  
CLMN Number of Claims: 36  
ECL Exemplary Claim: 1  
DRWN 8 Drawing Page(s)  
LN.CNT 872  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 3 OF 4 USPATFULL on STN  
AN 2002:287134 USPATFULL  
TI Immortal cell line derived from grouper epinephelus coioides and its applications therein  
IN Chi, Shau-Chi, Taipei, TAIWAN, PROVINCE OF CHINA  
PI US 2002159993 A1 20021031  
AI US 2001-4414 A1 20011206 (10)  
RLI Continuation-in-part of Ser. No. US 1999-450696, filed on 30 Nov 1999, PENDING  
PRAI US 1998-110699P 19981203 (60)  
DT Utility  
FS APPLICATION  
LREP VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP, P.O. BOX 34385, WASHINGTON, DC, 20043-9998  
CLMN Number of Claims: 25  
ECL Exemplary Claim: 1  
DRWN 8 Drawing Page(s)  
LN.CNT 1074  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 4 OF 4 USPATFULL on STN  
AN 2002:209358 USPATFULL  
TI Immortal cell line derived from grouper Epinephelus coioides and its application therein  
IN Chi, Shau-Chi, Taipei, TAIWAN, PROVINCE OF CHINA  
PA National Science Council, Taipei, TAIWAN, PROVINCE OF CHINA (non-U.S. corporation)  
PI US 6436702 B1 20020820  
AI US 1999-450696 19991130 (9)  
PRAI US 1998-110699P 19981203 (60)  
DT Utility  
FS GRANTED  
EXNAM Primary Examiner: Scheiner, Laurie  
LREP Chao, Fei-Fei, Venable, Baetjer, Howard & Civiletti, LLP  
CLMN Number of Claims: 8  
ECL Exemplary Claim: 1  
DRWN 17 Drawing Figure(s); 10 Drawing Page(s)  
LN.CNT 755  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s (nervous necrosis virus or nnv)  
L2 118 (NERVOUS NECROSIS VIRUS OR NNV)

=> s vaccine  
L3 126113 VACCINE

=> s (subunit or attenuated)  
L4 284031 (SUBUNIT OR ATTENUATED)

=> s L2(P)L3(P)L4  
L5 1 L2(P) L3(P) L4

=> d 15 bib ab

L5 ANSWER 1 OF 1 USPATFULL on STN  
AN 2003:71540 USPATFULL  
TI Nervous necrosis virus protein  
IN Lin, Han-You, Taipei, TAIWAN, PROVINCE OF CHINA  
Kuo, Tsun-Yung, Taipei, TAIWAN, PROVINCE OF CHINA  
Huang, Hsiao-I, Arcadia, CA, UNITED STATES  
Yang, Huey-Lang, Tenafly, NJ, UNITED STATES  
PI US 2003049825 A1 20030313  
US 6777247 B2 20040817  
AI US 2001-867932 A1 20010530 (9)  
DT Utility  
FS APPLICATION  
LREP Y. ROCKY TSAO, FISH & RICHARDSON P.C., 225 Franklin Street, Boston, MA,  
02110-2804  
CLMN Number of Claims: 19  
ECL Exemplary Claim: 1  
DRWN 4 Drawing Page(s)  
LN.CNT 399  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB The invention relates to a new RNA polymerase isolated from a Nervous  
Necrosis Virus.

=> s L2(P)L4  
L6 1 L2(P) L4

=> s L2 and L3 and L4  
L7 26 L2 AND L3 AND L4

=> d 17 1-26 bib ab

L7 ANSWER 1 OF 26 USPATFULL on STN  
AN 2005:30707 USPATFULL  
TI Novel expression vectors and uses thereof  
IN Krohn, Kai, Salmentaka, FINLAND  
Blazevic, Vesna, Tampere, FINLAND  
Tahtinen, Marja, Tampere, FINLAND  
Ustav, Mart, Tartu, ESTONIA  
Toots, Urve, Tartu, ESTONIA  
Mannjk, Andres, Tartu, ESTONIA  
Ranki, Annamari, Helsinki, FINLAND  
Ustav, Ene, Tartu, ESTONIA  
PI US 2005026137 A1 20050203  
AI US 2003-476615 A1 20031103 (10)  
WO 2002-FI379 20020503  
PRAI FI 2001-922 20010503  
US 2002-10138098 20020503  
DT Utility  
FS APPLICATION  
LREP YOUNG & THOMPSON, 745 SOUTH 23RD STREET, 2ND FLOOR, ARLINGTON, VA, 22202  
CLMN Number of Claims: 80  
ECL Exemplary Claim: 1  
DRWN 91 Drawing Page(s)  
LN.CNT 6716  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB The present invention relates to novel vectors, to DNA vaccines and gene  
therapeutics containing said vectors, to methods for the preparation of  
the vectors and DNA vaccines and gene therapeutics containing the  
vectors, and to therapeutic uses of said vectors. More specifically, the  
present invention relates to novel vectors comprising (a) an expression  
cassette of a gene of a nuclear-anchoring protein, which contains (i) a  
DNA binding domain capable of binding to a specific DNA sequence and  
(ii) a functional domain capable of binding to a nuclear component and

(b) a multimerized DNA sequence forming a binding site for the anchoring protein, and optionally (c) one or more expression cassettes of a DNA sequence of interest. In particular the invention relates to vectors that lack a papilloma virus origin of replication. The nuclear-anchoring protein might be the E2 protein of Bovine Papilloma Virus type 1 or Epstein-Barr Virus Nuclear Antigen 1. The invention also relates to vectors that lack an origin of replication functional in a mammalian cell. The invention further relates to methods for expressing a DNA sequence of interest in a subject.

L7 ANSWER 2 OF 26 USPATFULL on STN  
AN 2004:320927 USPATFULL  
TI Infectious salmon anaemia virus **vaccine**  
IN Villoing, Stephane, Bergen, NORWAY  
Biering, Eirik, Bergen, NORWAY  
PI US 2004253580 A1 20041216  
AI US 2004-493208 A1 20040420 (10)  
WO 2002-EP11552 20021016  
PRAI EP 2001-203951 20011019  
DT Utility  
FS APPLICATION  
LREP William M Blackstone, Intervet Inc, 405 State Street, Millsboro, DE, 19966  
CLMN Number of Claims: 24  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Page(s)  
LN.CNT 1043  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB This invention relates to Infectious Salmon Anaemia Virus (ISAV) antigenic polypeptides and nucleic acid molecules encoding them, as well as vaccines, transformed cells and transgenic fish. The antigenic polypeptides are able to elicit an immune response in immunized animals.

L7 ANSWER 3 OF 26 USPATFULL on STN  
AN 2004:227056 USPATFULL  
TI Immunization of fish with plant-expressed recombinant proteins  
IN Bootland, Linda, Crapaud, CANADA  
Beifuss, Katherine, Bryan, TX, UNITED STATES  
PI US 2004175441 A1 20040909  
AI US 2003-733031 A1 20031211 (10)  
PRAI US 2002-433381P 20021213 (60)  
DT Utility  
FS APPLICATION  
LREP Patricia A. Sweeney, 1835 Pleasant St., West Des Moines, IA, 50265-2334  
CLMN Number of Claims: 23  
ECL Exemplary Claim: 1  
DRWN 15 Drawing Page(s)  
LN.CNT 1310  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB Plants are produced that express an amino acid sequence that, when administered to a fish, produce an antigenic or immune response in the fish. The amino acid sequence in one embodiment is an antigen from an organism that causes pathology in fish. The plant tissue may be fed to the fish, or mixed with other materials and fed to fish, or extracted and administered to the fish.

L7 ANSWER 4 OF 26 USPATFULL on STN  
AN 2004:31067 USPATFULL  
TI Method of recovering a nucleic acid encoding a proteinaceous binding domain which binds a target material  
IN Ladner, Robert Charles, Ijamsville, MD, UNITED STATES  
Guterman, Sonia Kosow, Belmont, MA, UNITED STATES  
Roberts, Bruce Lindsay, Milford, MA, UNITED STATES  
Markland, William, Milford, MA, UNITED STATES  
Ley, Arthur Charles, Newton, MA, UNITED STATES  
Kent, Rachel Baribault, Boxborough, MA, UNITED STATES  
PI US 2004023205 A1 20040205  
AI US 2002-126544 A1 20020422 (10)

RLI Continuation of Ser. No. US 1997-993776, filed on 18 Dec 1997, ABANDONED  
Continuation of Ser. No. US 1995-415922, filed on 3 Apr 1995, GRANTED,  
Pat. No. US 5837500 Continuation of Ser. No. US 1993-9319, filed on 26  
Jan 1993, GRANTED, Pat. No. US 5403484 Division of Ser. No. US  
1991-664989, filed on 1 Mar 1991, GRANTED, Pat. No. US 5223409  
Continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990,  
ABANDONED Continuation-in-part of Ser. No. US 1988-240160, filed on 2  
Sep 1988, ABANDONED

PRAI WO 1989-US3731 19890901

DT Utility

FS APPLICATION

LREP BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W., Washington, DC,  
20001

CLMN Number of Claims: 17

ECL Exemplary Claim: 1

DRWN 16 Drawing Page(s)

LN.CNT 15868

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA  
molecules, each encoding a protein comprising one of a family of similar  
potential binding domains and a structural signal calling for the  
display of the protein on the outer surface of a chosen bacterial cell,  
bacterial spore or phage (genetic package) are introduced into a genetic  
package. The protein is expressed and the potential binding domain is  
displayed on the outer surface of the package. The cells or viruses  
bearing the binding domains which recognize the target molecule are  
isolated and amplified. The successful binding domains are then  
characterized. One or more of these successful binding domains is used  
as a model for the design of a new family of potential binding domains,  
and the process is repeated until a novel binding domain having a  
desired affinity for the target molecule is obtained. In one embodiment,  
the first family of potential binding domains is related to bovine  
pancreatic trypsin inhibitor, the genetic package is M13 phage, and the  
protein includes the outer surface transport signal of the M13 gene III  
protein.

L7 ANSWER 5 OF 26 USPATFULL on STN

AN 2004:7306 USPATFULL

TI Nucleic acids, genetic constructs, and library of nucleic acids encoding  
fusion proteins

IN Ladner, Robert Charles, Ijamsville, MD, UNITED STATES

Guterman, Sonia Kosow, Belmont, MA, UNITED STATES

Roberts, Bruce Lindsay, Milford, MA, UNITED STATES

Markland, William, Milford, MA, UNITED STATES

Ley, Arthur Charles, Newton, MA, UNITED STATES

Kent, Rachel Baribault, Boxborough, MA, UNITED STATES

PI US 2004005539 A1 20040108

AI US 2002-127028 A1 20020422 (10)

RLI Continuation of Ser. No. US 1997-993776, filed on 18 Dec 1997, ABANDONED  
Continuation of Ser. No. US 1995-415922, filed on 3 Apr 1995, GRANTED,  
Pat. No. US 5837500 Continuation of Ser. No. US 1993-9319, filed on 26  
Jan 1993, GRANTED, Pat. No. US 5403484 Division of Ser. No. US  
1991-664989, filed on 1 Mar 1991, GRANTED, Pat. No. US 5223409  
Continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990,  
ABANDONED Continuation-in-part of Ser. No. US 1988-240160, filed on 2  
Sep 1988, ABANDONED

PRAI WO 1989-US3731 19890901

DT Utility

FS APPLICATION

LREP BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W., Washington, DC,  
20001

CLMN Number of Claims: 22

ECL Exemplary Claim: 1

DRWN 16 Drawing Page(s)

LN.CNT 16057

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA  
molecules, each encoding a protein comprising one of a family of similar

potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

L7 ANSWER 6 OF 26 USPATFULL on STN

AN 2004:1844 USPATFULL

TI Immortal cell line derived from grouper *Epinephelus coioides* and its applications therein

IN Chi, Shau-Chi, Taipei, TAIWAN, PROVINCE OF CHINA

PI US 2004001863 A1 20040101

AI US 2001-4432 A1 20011206 (10)

RLI Continuation-in-part of Ser. No. US 1999-450696, filed on 30 Nov 1999, GRANTED, Pat. No. US 6436702

PRAI US 1998-110699P 19981203 (60)

DT Utility

FS APPLICATION

LREP VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP, P.O. BOX 34385, WASHINGTON, DC, 20043-9998

CLMN Number of Claims: 14

ECL Exemplary Claim: 1

DRWN 8 Drawing Page(s)

LN.CNT 952

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides for fish vaccines and methods of using the fish vaccines to immunize susceptible fish against viral infections. In particular, the present invention is directed to vaccines and methods of immunizing susceptible fish for two aqua-viral diseases, the viral nervous necrosis (VNN) disease which is caused by **nervous necrosis virus (NNV)**, and infectious pancreatic necrosis (IPN) disease which is caused by infectious pancreatic necrosis virus (IPNV). The vaccines are produced by inactivated viruses which in turn were produced from treatment of viruses that are mass-produced in an immortal cell line derived from *Epinephelus coioides* having an ATCC deposit number of PTA-859.

L7 ANSWER 7 OF 26 USPATFULL on STN

AN 2003:312289 USPATFULL

TI Directed evolution of novel binding proteins

IN Ladner, Robert Charles, Ijamsville, MD, UNITED STATES

Guterman, Sonia Kosow, Belmont, MA, UNITED STATES

Roberts, Bruce Lindsay, Milford, MA, UNITED STATES

Markland, William, Milford, MA, UNITED STATES

Ley, Arthur Charles, Newton, MA, UNITED STATES

Kent, Rachel Baribault, Boxborough, MA, UNITED STATES

PI US 2003219886 A1 20031127

AI US 2001-896095 A1 20010629 (9)

RLI Continuation of Ser. No. US 1997-993776, filed on 18 Dec 1997, PENDING

Continuation of Ser. No. US 1995-415922, filed on 3 Apr 1995, GRANTED,

Pat. No. US 5837500 Continuation of Ser. No. US 1993-9319, filed on 26

Jan 1993, GRANTED, Pat. No. US 5403484 Division of Ser. No. US

1991-664989, filed on 1 Mar 1991, GRANTED, Pat. No. US 5223409

Continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990,

ABANDONED Continuation-in-part of Ser. No. US 1988-240160, filed on 2 Sep 1988, ABANDONED

PRAI WO 1989-US3731 19890901

DT Utility

FS APPLICATION  
LREP BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W., Washington, DC,  
20001  
CLMN Number of Claims: 100  
ECL Exemplary Claim: 1  
DRWN 16 Drawing Page(s)  
LN.CNT 15529

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

L7 ANSWER 8 OF 26 USPATFULL on STN

AN 2003:312125 USPATFULL

TI Fusion proteins, modified filamentous bacteriophage, and populations or libraries of same

IN Ladner, Robert Charles, Ijamsville, MD, UNITED STATES  
Guterman, Sonia Kosow, Belmont, MA, UNITED STATES  
Roberts, Bruce Lindsay, Milford, MA, UNITED STATES  
Markland, William, Milford, MA, UNITED STATES  
Ley, Arthur Charles, Newton, MA, UNITED STATES  
Kent, Rachel Baribault, Boxborough, MA, UNITED STATES

PI US 2003219722 A1 20031127

AI US 2002-126685 A1 20020422 (10)

RLI Continuation of Ser. No. US 1997-993776, filed on 18 Dec 1997, PENDING  
Continuation of Ser. No. US 1995-415922, filed on 3 Apr 1995, GRANTED,  
Pat. No. US 5837500 Continuation of Ser. No. US 1993-9319, filed on 26  
Jan 1993, GRANTED, Pat. No. US 5403484 Division of Ser. No. US  
1991-664989, filed on 1 Mar 1991, GRANTED, Pat. No. US 5223409  
Continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990,  
ABANDONED Continuation-in-part of Ser. No. US 1988-240160, filed on 2  
Sep 1988, ABANDONED

PRAI WO 1989-US3731 19890901

DT Utility

FS APPLICATION

LREP BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W., Washington, DC,  
20001

CLMN Number of Claims: 38

ECL Exemplary Claim: 1

DRWN 16 Drawing Page(s)

LN.CNT 16459

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a

desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

L7 ANSWER 9 OF 26 USPATFULL on STN

AN 2003:225319 USPATFULL

TI Modified nodavirus rna for gene delivery

IN Bensi, Giuliano, Florence, ITALY

Zippo, Alessio, Bologna, ITALY

PI US 2003157130 A1 20030821

AI US 2003-221993 A1 20030107 (10)

WO 2001-IB566 20010326

PRAI GB 2000-7231 20000324

DT Utility

FS APPLICATION

LREP Alisa A Harbin, Chiron Corporation, Intellectual Property R440, PO Box 8097, Emeryville, CA, 94662-8097

CLMN Number of Claims: 29

ECL Exemplary Claim: 1

DRWN 26 Drawing Page(s)

LN.CNT 1069

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides a nodavirus RNA1 molecule modified to include a heterologous insertion which is downstream of its replicase ORF and, preferably, its B2 ORF. The insertion preferably comprises one or more protein-coding regions. The modified RNA1 may be packaged in a VLP, such as a papillomavirus VLP. The small size of nodavirus RNA1 makes it ideal for HPV packaging.

L7 ANSWER 10 OF 26 USPATFULL on STN

AN 2003:187383 USPATFULL

TI Novel expression vectors and uses thereof

IN Krohn, Kai, Salmentaka, FINLAND

Blazevic, Vesna, Tampere, FINLAND

Tahtinen, Marja, Tampere, FINLAND

Ustav, Mart, Tartu, ESTONIA

Toots, Urve, Tartu, ESTONIA

Mannik, Andres, Tartu, ESTONIA

Ranki, Annamari, Helsinki, FINLAND

Ustav, Ene, Tartu, ESTONIA

PI US 2003129169 A1 20030710

AI US 2002-138098 A1 20020503 (10)

PRAI FI 2001-922 20010503

DT Utility

FS APPLICATION

LREP PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711

CLMN Number of Claims: 80

ECL Exemplary Claim: 1

DRWN 100 Drawing Page(s)

LN.CNT 6888

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel vectors, to DNA vaccines and gene therapeutics containing said vectors, to methods for the preparation of the vectors and DNA vaccines and gene therapeutics, and to therapeutic uses of said vectors. More specifically, the present invention relates to novel vectors comprising an expression cassette of a gene of a nuclear-anchoring protein, which contains a DNA binding domain capable of binding to a specific DNA sequence and a functional domain capable of binding to a nuclear component and a multimerized DNA sequence forming a binding site for the nuclear-anchoring protein, and optionally an expression cassette of a gene, genes or a DNA sequence or DNA sequences of interest. The present invention further relates to DNA vaccines and gene therapeutics containing the novel vectors, to methods for the preparation of the novel vectors and the DNA vaccines and gene therapeutics containing the novel vectors, and to the use the vectors in therapy.



L7 ANSWER 11 OF 26 USPATFULL on STN  
AN 2003:165862 USPATFULL  
TI Directed evolution of novel binding proteins  
IN Ladner, Robert Charles, Ijamsville, MD, UNITED STATES  
Guterman, Sonia Kosow, Belmont, MA, UNITED STATES  
Roberts, Bruce Lindsay, Milford, MA, UNITED STATES  
Markland, William, Milford, MA, UNITED STATES  
Ley, Arthur Charles, Newton, MA, UNITED STATES  
Kent, Rachel Baribault, Boxborough, MA, UNITED STATES  
PI US 2003113717 A1 20030619  
AI US 2001-893878 A1 20010629 (9)  
RLI Continuation of Ser. No. US 1997-993776, filed on 18 Dec 1997, PENDING  
Continuation of Ser. No. US 1995-415922, filed on 3 Apr 1995, PATENTED  
Continuation of Ser. No. US 1993-9319, filed on 26 Jan 1993, PATENTED  
Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, PATENTED  
Continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990,  
ABANDONED Continuation-in-part of Ser. No. US 1988-240160, filed on 2  
Sep 1988, ABANDONED  
PRAI WO 1989-US3731 19890901  
DT Utility  
FS APPLICATION  
LREP BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W., Washington, DC,  
20001  
CLMN Number of Claims: 25  
ECL Exemplary Claim: 1  
DRWN 16 Drawing Page(s)  
LN.CNT 15933  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA  
molecules, each encoding a protein comprising one of a family of similar  
potential binding domains and a structural-signal calling for the  
display of the protein on the outer surface of a chosen bacterial cell,  
bacterial spore or phage (genetic package) are introduced into a genetic  
package. The protein is expressed and the potential binding domain is  
displayed on the outer surface of the package. The cells or viruses  
bearing the binding domains which recognize the target molecule are  
isolated and amplified. The successful binding domains are then  
characterized. One or more of these successful binding domains is used  
as a model for the design of a new family of potential binding domains,  
and the process is repeated until a novel binding domain having a  
desired affinity for the target molecule is obtained. In one embodiment,  
the first family of potential binding domains is related to bovine  
pancreatic trypsin inhibitor, the genetic package is M13 phage, and the  
protein includes the outer surface transport signal of the M13 gene III  
protein.

L7 ANSWER 12 OF 26 USPATFULL on STN  
AN 2003:71540 USPATFULL  
TI **Nervous necrosis virus** protein  
IN Lin, Han-You, Taipei, TAIWAN, PROVINCE OF CHINA  
Kuo, Tsun-Yung, Taipei, TAIWAN, PROVINCE OF CHINA  
Huang, Hsiao-I, Arcadia, CA, UNITED STATES  
Yang, Huey-Lang, Tenafly, NJ, UNITED STATES  
PI US 2003049825 A1 20030313  
US 6777247 B2 20040817  
AI US 2001-867932 A1 20010530 (9)  
DT Utility  
FS APPLICATION  
LREP Y. ROCKY TSAO, FISH & RICHARDSON P.C., 225 Franklin Street, Boston, MA,  
02110-2804  
CLMN Number of Claims: 19  
ECL Exemplary Claim: 1  
DRWN 4 Drawing Page(s)  
LN.CNT 399  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a new RNA polymerase isolated from a  
**Nervous Necrosis Virus.**

L7 ANSWER 13 OF 26 USPATFULL on STN  
AN 2002:272761 USPATFULL  
TI Directed evolution of novel binding proteins  
IN Ladner, Robert Charles, Ijamsville, MD, UNITED STATES  
Guterman, Sonia Kosow, Belmont, MA, UNITED STATES  
Roberts, Bruce Lindsay, Milford, MA, UNITED STATES  
Markland, William, Milford, MA, UNITED STATES  
Ley, Arthur Charles, Newton, MA, UNITED STATES  
Kent, Rachel Baribault, Boxborough, MA, UNITED STATES  
PI US 2002150881 A1 20021017  
AI US 2001-781988 A1 20010214 (9)  
RLI Continuation of Ser. No. US 1998-192067, filed on 16 Nov 1998, ABANDONED  
Continuation of Ser. No. US 1995-415922, filed on 3 Apr 1995, PATENTED  
Continuation of Ser. No. US 1993-9319, filed on 26 Jan 1993, PATENTED  
Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, PATENTED  
Continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990,  
ABANDONED Continuation-in-part of Ser. No. US 1988-240160, filed on 2  
Sep 1988, ABANDONED  
PRAI WO 1989-US3731 19890901  
DT Utility  
FS APPLICATION  
LREP BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W., Washington, DC,  
20001  
CLMN Number of Claims: 18  
ECL Exemplary Claim: 1  
DRWN 16 Drawing Page(s)  
LN.CNT 15696  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA  
molecules, each encoding a protein comprising one of a family of similar  
potential binding domains and a structural signal calling for the  
display of the protein on the outer surface of a chosen bacterial cell,  
bacterial spore or phage (genetic package) are introduced into a genetic  
package. The protein is expressed and the potential binding domain is  
displayed on the outer surface of the package. The cells or viruses  
bearing the binding domains which recognize the target molecule are  
isolated and amplified. The successful binding domains are then  
characterized. One or more of these successful binding domains is used  
as a model for the design of a new family of potential binding domains,  
and the process is repeated until a novel binding domain having a  
desired affinity for the target molecule is obtained. In one embodiment,  
the first family of potential binding domains is related to bovine  
pancreatic trypsin inhibitor, the genetic package is M13 phage, and the  
protein includes the outer surface transport signal of the M13 gene III  
protein.

L7 ANSWER 14 OF 26 USPATFULL on STN  
AN 2001:105334 USPATFULL  
TI DELIVERY OF NUCLEIC ACID INTO AQUATIC ANIMALS  
IN POET, STEVEN E., WINTERVILLE, GA, United States  
BURNLEY, VICTORIA VAUGHN, ATHENS, GA, United States  
PI US 2001006953 A1 20010705  
US 6462027 B2 20021008  
AI US 1999-347959 A1 19990706 (9)  
PRAI US 1998-91820P 19980706 (60)  
DT Utility  
FS APPLICATION  
LREP SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.O. BOX 2938, MINNEAPOLIS, MN,  
55402  
CLMN Number of Claims: 48  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 1265  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are methods for delivering a preselected polypeptide into an  
aquatic animal by contacting the aquatic animal with an aqueous medium  
containing an isolated non-infectious, non-integrating polynucleotide

encoding an immunogen, wherein the polynucleotide is operably linked to a promoter that controls the expression of the polynucleotide in the aquatic animal, and wherein expression of the polypeptide stimulates a detectable biological response in the animal. Also disclosed are methods for delivering a desired polynucleotide into an aquatic animal comprising contacting the aquatic animal with an aquatic medium containing an isolated non-infectious, non-integrating polynucleotide, wherein the polynucleotide is substantially complementary to all or a portion of a messenger RNA (mRNA) encoding a preselected polypeptide, and wherein expression of the polypeptide stimulates or represses a detectable biological response in the animal. Methods are further disclosed for delivering a preselected polynucleotide into an aquatic animal comprising contacting the aquatic animal with an aqueous medium containing an isolated non-infectious, non-integrating polynucleotide that is not in contact with a liposome or lipid carrier, wherein the polynucleotide stimulates a detectable biological response in the animal.

L7 ANSWER 15 OF 26 USPATFULL on STN  
AN 2001:14470 USPATFULL  
TI DNA based vaccination of fish  
IN Davis, Heather L., Ottawa, Canada  
PA Loeb Health Research Institute at The Ottawa Hospital, Ottawa, Canada  
(non-U.S. corporation)  
PI US 6180614 B1 20010130  
AI US 1998-115423 19980714 (9)  
RLI Continuation of Ser. No. US 1996-740805, filed on 4 Nov 1996, now  
patented, Pat. No. US 5780448, issued on 14 Jul 1998  
PRAI US 1995-6290P 19951107 (60)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Salimi, Ali R.  
LREP Yankwich, Leon R., O'Brien, David G.  
CLMN Number of Claims: 84  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 1280

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to methods of immunization of aquaculture species by introducing DNA expression systems into the aquaculture species. Such DNA expression systems preferably include DNA sequences encoding polypeptides of pathogens of species of aquaculture. The present invention also relates to methods of administration of DNA expression systems into aquaculture. Such methods include injection, spray, and immersion techniques. The methods of this invention are useful for prophylactic vaccination or therapeutic immunization of fin-fish, shellfish, or other aquatic animals against infectious diseases.

L7 ANSWER 16 OF 26 USPATFULL on STN  
AN 1999:106313 USPATFULL  
TI Totally Synthetic Affinity Reagents  
IN Kay, Brian K, Chapel Hill, NC, United States  
Fowlkes, Dana M., Chapel Hill, NC, United States  
Adey, Nils B., Carrboro, NC, United States  
Sparks, Andrew B., Carrboro, NC, United States  
PA University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)  
PI US 5948635 19990907  
AI US 1995-471068 19950606 (8)  
RLI Division of Ser. No. US 1994-189331, filed on 31 Jan 1994, now patented, Pat. No. US 5747334 which is a continuation-in-part of Ser. No. US 1993-176500, filed on 30 Dec 1993, now patented, Pat. No. US 5498538 which is a continuation of Ser. No. US 1993-13416, filed on 1 Feb 1993, now abandoned which is a continuation-in-part of Ser. No. US 1992-854133, filed on 19 Mar 1992, now abandoned which is a continuation of Ser. No. US 1990-480420, filed on 15 Feb 1990, now abandoned  
DT Utility

FS Granted  
EXNAM Primary Examiner: Mertz, Prema  
LREP Morgan & Finnegan, LLP  
CLMN Number of Claims: 39  
ECL Exemplary Claim: 1  
DRWN 27 Drawing Figure(s); 26 Drawing Page(s)  
LN.CNT 6546

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel method for producing novel and/or improved heterofunctional binding fusion proteins termed Totally Synthetic Affinity Reagents (TSARs) is disclosed. TSARs are concatenated heterofunctional proteins, polypeptides or peptides comprising at least two functional regions: a binding domain with affinity for a ligand and a second effector peptide portion that is chemically or biologically active. In one embodiment, the heterofunctional proteins, polypeptides or peptides further comprise a linker peptide portion between the binding domain and the second active peptide portion. The linker peptide can be either susceptible or not susceptible to cleavage by enzymatic or chemical means. Novel and/or improved heterofunctional binding reagents as well as methods for using the reagents for a variety of in vitro and in vivo applications are also disclosed.

L7 ANSWER 17 OF 26 USPATFULL on STN  
AN 1998:160097 USPATFULL  
TI Totally synthetic affinity reagents  
IN Kay, Brian K., Chapel Hill, NC, United States  
Adey, Nils B., Salt Lake City, UT, United States  
PA The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)  
PI US 5852167 19981222  
AI US 1995-471800 19950606 (8)  
RLI Division of Ser. No. US 1993-176500, filed on 30 Dec 1993, now patented, Pat. No. US 5498538 which is a continuation of Ser. No. US 1993-13416, filed on 1 Feb 1993, now abandoned which is a continuation-in-part of Ser. No. US 1992-854133, filed on 19 Mar 1992, now abandoned which is a continuation of Ser. No. US 1990-480420, filed on 15 Feb 1990, now abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Walsh, Stephen; Assistant Examiner: Sorensen, Kenneth A.  
LREP Morgan & Finnegan, L.L.P.  
CLMN Number of Claims: 3  
ECL Exemplary Claim: 1  
DRWN 26 Drawing Figure(s); 20 Drawing Page(s)  
LN.CNT 5029

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel method for producing novel and/or improved heterofunctional binding fusion proteins termed Totally Synthetic Affinity Reagents (TSARs) is disclosed. TSARs are concatenated heterofunctional proteins, polypeptides or peptides comprising at least two functional regions: a binding domain with affinity for a ligand and a second effector peptide portion that is chemically or biologically active. In one embodiment, the heterofunctional proteins, polypeptides or peptides further comprise a linker peptide portion between the binding domain and the second active peptide portion. The linker peptide can be either susceptible or not susceptible to cleavage by enzymatic or chemical means. Novel and/or improved heterofunctional binding reagents as well as methods for using the reagents for a variety of in vitro and in vivo applications are also disclosed.

L7 ANSWER 18 OF 26 USPATFULL on STN  
AN 1998:151075 USPATFULL  
TI Totally synthetic affinity reagents  
IN Kay, Brian K., Chapel Hill, NC, United States  
Fowlkes, Dana M., Chapel Hill, NC, United States  
PA The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)

PI US 5844076 19981201  
AI US 1995-471939 19950606 (8)  
RLI Division of Ser. No. US 1993-176500, filed on 30 Dec 1993, now patented,  
Pat. No. US 5498538 which is a continuation of Ser. No. US 1993-13416,  
filed on 1 Feb 1993, now abandoned which is a continuation-in-part of  
Ser. No. US 1992-854133, filed on 19 Mar 1992, now abandoned which is a  
continuation of Ser. No. US 1990-480420, filed on 15 Feb 1990, now  
abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Celsa, Bennett  
LREP Pennie & Edmonds LLP  
CLMN Number of Claims: 3  
ECL Exemplary Claim: 1  
DRWN 26 Drawing Figure(s); 20 Drawing Page(s)  
LN.CNT 5069

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for producing heterofunctional binding fusion proteins termed  
Totally Synthetic Affinity Reagents (TSARs) is disclosed. TSARs are  
concatenated heterofunctional proteins, polypeptides or peptides  
comprising at least two functional regions: a binding domain with  
affinity for a ligand and a second effector peptide portion that is  
chemically or biologically active. In one embodiment, the  
heterofunctional proteins, polypeptides or peptides further comprise a  
linker peptide portion between the binding domain and the second active  
peptide portion. The linker peptide can be either susceptible or not  
susceptible to cleavage by enzymatic or chemical means. Heterofunctional  
binding reagents as well as methods for using the reagents for a variety  
of in vitro and in vivo applications are also disclosed.

L7 ANSWER 19 OF 26 USPATFULL on STN  
AN 1998:143904 USPATFULL  
TI Directed evolution of novel binding proteins  
IN Ladner, Robert Charles, Ijamsville, MD, United States  
Guttermann, Sonia Kosow, Belmont, MA, United States  
Roberts, Bruce Lindsay, Milford, MA, United States  
Markland, William, Milford, MA, United States  
Ley, Arthur Charles, Newton, MA, United States  
Kent, Rachel Baribault, Boxborough, MA, United States  
PA Dyax, Corp., Cambridge, MA, United States (U.S. corporation)  
PI US 5837500 19981117  
AI US 1995-415922 19950403 (8)  
RLI Continuation of Ser. No. US 1993-9319, filed on 26 Jan 1993, now  
patented, Pat. No. US 5403484 which is a division of Ser. No. US  
1991-664989, filed on 1 Mar 1991, now patented, Pat. No. US 5223409  
which is a continuation-in-part of Ser. No. US 1990-487063, filed on 2  
Mar 1990, now abandoned which is a continuation-in-part of Ser. No. US  
1988-240160, filed on 2 Sep 1988, now abandoned

DT Utility  
FS Granted  
EXNAM Primary Examiner: Ulm, John  
LREP Cooper, Iver P.  
CLMN Number of Claims: 43  
ECL Exemplary Claim: 1  
DRWN 16 Drawing Figure(s); 16 Drawing Page(s)  
LN.CNT 15973

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA  
molecules, each encoding a protein comprising one of a family of similar  
potential binding domains and a structural signal calling for the  
display of the protein on the outer surface of a chosen bacterial cell,  
bacterial spore or phage (genetic package) are introduced into a genetic  
package. The protein is expressed and the potential binding domain is  
displayed on the outer surface of the package. The cells or viruses  
bearing the binding domains which recognize the target molecule are  
isolated and amplified. The successful binding domains are then  
characterized. One or more of these successful binding domains is used  
as a model for the design of a new family of potential binding domains,

and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

L7 ANSWER 20 OF 26 USPATFULL on STN

AN 1998:82736 USPATFULL

TI DNA-based vaccination of fish

IN Davis, Heather L., Ottawa, Canada

PA Ottawa Civic Hospital Loeb Research, Ottawa, Canada (non-U.S. corporation)

PI US 5780448 19980714

AI US 1996-740805 19961104 (8)

PRAI US 1995-6290P 19951107 (60)

DT Utility

FS Granted

EXNAM Primary Examiner: Mosher, Mary E.; Assistant Examiner: Salimi, Ali R.

LREP Fish & Richardson, P.C.

CLMN Number of Claims: 83

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1309

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to methods of immunization of aquaculture species by introducing DNA expression systems into the aquaculture species. Such DNA expression systems preferably include DNA sequences encoding polypeptides of pathogens of species of aquaculture. The present invention also relates to methods of administration of DNA expression systems into aquaculture. Such methods include injection, spray, and immersion techniques. The methods of this invention are useful for prophylactic vaccination or therapeutic immunization of fin-fish, shellfish, or other aquatic animals against infectious diseases.

L7 ANSWER 21 OF 26 USPATFULL on STN

AN 1998:48252 USPATFULL

TI Random peptide library

IN Kay, Brian K, Chapel Hill, NC, United States

Fowlkes, Dana M., Chapel Hill, NC, United States

Adey, Nils B., Carrboro, NC, United States

Sparks, Andrew B., Carrboro, NC, United States

PA The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)

PI US 5747334 19980505

AI US 1994-189331 19940131 (8)

RLI Continuation-in-part of Ser. No. US 1993-176500, filed on 30 Dec 1993, now patented, Pat. No. US 5498538 which is a continuation of Ser. No. US 1993-13416, filed on 1 Feb 1993, now abandoned which is a continuation-in-part of Ser. No. US 1992-854133, filed on 19 Mar 1992, now abandoned which is a continuation of Ser. No. US 1990-480420, filed on 15 Feb 1990, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Ulm, John

LREP Pennie & Edmonds LLP

CLMN Number of Claims: 13

ECL Exemplary Claim: 1

DRWN 33 Drawing Figure(s); 26 Drawing Page(s)

LN.CNT 5554

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel method for producing novel and/or improved heterofunctional binding fusion proteins termed Totally Synthetic Affinity Reagents (TSARs) is disclosed. TSARs are concatenated heterofunctional proteins, polypeptides or peptides comprising at least two functional regions: a binding domain with affinity for a ligand and a second effector peptide portion that is chemically or biologically active. In one embodiment,

the heterofunctional proteins, polypeptides or peptides further comprise a linker peptide portion between the binding domain and the second active peptide portion. The linker peptide can be either susceptible or not susceptible to cleavage by enzymatic or chemical means. Novel and/or improved heterofunctional binding reagents as well as methods for using the reagents for a variety of in vitro and in vivo applications are also disclosed.

L7 ANSWER 22 OF 26 USPATFULL on STN  
AN 97:36293 USPATFULL  
TI Totally synthetic affinity reagents  
IN Kay, Brian K., Chapel Hill, NC, United States  
Fowlkes, Dana M., Chapel Hill, NC, United States  
PA The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)  
PI US 5625033 19970429  
AI US 1995-471052 19950606 (8)  
RLI Division of Ser. No. US 1993-176500, filed on 30 Dec 1993, now patented, Pat. No. US 5498538 which is a continuation of Ser. No. US 1993-13416, filed on 1 Feb 1993, now abandoned which is a continuation-in-part of Ser. No. US 1992-854133, filed on 19 Mar 1992, now abandoned which is a continuation of Ser. No. US 1990-480420, filed on 15 Feb 1990, now abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Walsh, Stephen G.; Assistant Examiner: Sorensen, Ken  
LREP Pennie & Edmonds  
CLMN Number of Claims: 1  
ECL Exemplary Claim: 1  
DRWN 26 Drawing Figure(s); 21 Drawing Page(s)  
LN.CNT 4716  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB A novel method for producing novel and/or improved heterofunctional binding fusion proteins termed Totally Synthetic Affinity Reagents (TSARs) is disclosed. TSARs are concatenated heterofunctional proteins, polypeptides or peptides comprising at least two functional regions: a binding domain with affinity for a ligand and a second effector peptide portion that is chemically or biologically active. In one embodiment, the heterofunctional proteins, polypeptides or peptides further comprise a linker peptide portion between the binding domain and the second active peptide portion. The linker peptide can be either susceptible or not susceptible to cleavage by enzymatic or chemical means. Novel and/or improved heterofunctional binding reagents as well as methods for using the reagents for a variety of in vitro and in vivo applications are also disclosed.

L7 ANSWER 23 OF 26 USPATFULL on STN  
AN 96:101466 USPATFULL  
TI Directed evolution of novel binding proteins  
IN Ladner, Robert C., Ijamsville, MD, United States  
Guterman, Sonia K., Belmont, MA, United States  
Roberts, Bruce L., Milford, MA, United States  
Markland, William, Milford, MA, United States  
Ley, Arthur C., Newton, MA, United States  
Kent, Rachel B., Boxborough, MA, United States  
PA Protein Engineering Corporation, Cambridge, MA, United States (U.S. corporation)  
PI US 5571698 19961105  
AI US 1993-57667 19930618 (8)  
DCD 20100629  
RLI Continuation of Ser. No. US 1991-664989, filed on 1 Mar 1991, now patented, Pat. No. US 5223409 which is a continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990, now abandoned which is a continuation-in-part of Ser. No. US 1988-240160, filed on 2 Sep 1988, now abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Ulm, John

LREP Cooper, Iver P.  
CLMN Number of Claims: 83  
ECL Exemplary Claim: 1  
DRWN 16 Drawing Figure(s); 16 Drawing Page(s)  
LN.CNT 15323

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

L7 ANSWER 24 OF 26 USPATFULL on STN  
AN 96:21019 USPATFULL  
TI Totally synthetic affinity reagents  
IN Kay, Brian K., Chapel Hill, NC, United States  
Fowlkes, Dana M., Chapel Hill, NC, United States  
PA The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)  
PI US 5498538 19960312  
AI US 1993-176500 19931230 (8)  
RLI Continuation of Ser. No. US 1993-13416, filed on 1 Feb 1993, now abandoned which is a continuation-in-part of Ser. No. US 1992-854133, filed on 19 Mar 1992, now abandoned which is a continuation of Ser. No. US 1990-480420, filed on 15 Feb 1990, now abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Walsh, Stephen G.; Assistant Examiner: Ulm, John D.  
LREP Pennie & Edmonds  
CLMN Number of Claims: 26  
ECL Exemplary Claim: 1  
DRWN 26 Drawing Figure(s); 21 Drawing Page(s)  
LN.CNT 4731

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel method for producing novel and/or improved heterofunctional binding fusion proteins termed Totally Synthetic Affinity Reagents (TSARs) is disclosed. TSARs are concatenated heterofunctional proteins, polypeptides or peptides comprising at least two functional regions: a binding domain with affinity for a ligand and a second effector peptide portion that is chemically or biologically active. In one embodiment, the heterofunctional proteins, polypeptides or peptides further comprise a linker peptide portion between the binding domain and the second active peptide portion. The linker peptide can be either susceptible or not susceptible to cleavage by enzymatic or chemical means. Novel and/or improved heterofunctional binding reagents as well as methods for using the reagents for a variety of in vitro and in vivo applications are also disclosed.

L7 ANSWER 25 OF 26 USPATFULL on STN  
AN 95:29292 USPATFULL  
TI Viruses expressing chimeric binding proteins  
IN Ladner, Robert C., Ijamsville, MD, United States  
Guterman, Sonia K., Belmont, MA, United States  
Roberts, Bruce L., Milford, MA, United States  
Markland, William, Milford, MA, United States  
Ley, Arthur C., Newton, MA, United States



Kent, Rachel B., Boxborough, MA, United States  
PA Protein Engineering Corporation, Cambridge, MA, United States (U.S. corporation)  
PI US 5403484 19950404  
AI US 1993-9319 19930126 (8)  
RLI Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, now patented, Pat. No. US 5223409 which is a continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990, now abandoned which is a continuation-in-part of Ser. No. US 1988-240160, filed on 2 Sep 1988, now abandoned  
PRAI WO 1989-3731 19890901  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Hill, Jr., Robert J.; Assistant Examiner: Ulm, John D.  
LREP Cooper, Iver P.  
CLMN Number of Claims: 49  
ECL Exemplary Claim: 1  
DRWN 16 Drawing Figure(s); 16 Drawing Page(s)  
LN.CNT 14368

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

L7 ANSWER 26 OF 26 USPATFULL on STN

AN 93:52487 USPATFULL

TI Directed evolution of novel binding proteins  
IN Ladner, Robert C., Ijamsville, MD, United States  
Guterman, Sonia K., Belmont, MA, United States  
Roberts, Bruce L., Milford, MA, United States  
Markland, William, Milford, MA, United States  
Ley, Arthur C., Newton, MA, United States  
Kent, Rachel B., Boxborough, MA, United States

PA Protein Engineering Corp., Cambridge, MA, United States (U.S. corporation)

PI US 5223409 19930629

AI US 1991-664989 19910301 (7)

RLI Continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990, now abandoned And a continuation-in-part of Ser. No. US 1988-240160, filed on 2 Sep 1988, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Hill, Jr., Robert J.; Assistant Examiner: Ulm, John D.

LREP Cooper, Iver P.

CLMN Number of Claims: 66

ECL Exemplary Claim: 1

DRWN 16 Drawing Figure(s); 16 Drawing Page(s)

LN.CNT 15410

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic

package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.